

ABSTRACT

This invention discloses an optical interleaver that includes a first collimating lens for collimating an input optical signal into collimated beams and a second collimating lens for focusing the collimated parallel beams into an output optical fiber. The interleaver further includes a phase delay difference generating means for generating a phase-delay difference between portions of the collimated parallel beams for generating an interference in the second collimating lens for selectively enhance signal transmission of certain wavelengths. In a preferred embodiment, the phase delay difference generating means comprising a glass plate blocking a portion of the collimated parallel beams for generating a phase delay for a portion of the collimated parallel beams passing therethrough. In another preferred embodiment, the phase delay difference generating means comprising a glass plate having an upper portion covering an upper portion of the collimated parallel beams. The glass plate having a lower portion covering a lower portion of the collimated parallel beams for generating a phase delay difference between the upper portion and lower portion of the collimated parallel beams. In another preferred embodiment, the interleaver further includes a control means for controlling the phase delay difference generating means for selectively generating signal transmission at different wavelengths according to the interference generated in the second collimating lens.

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